

NORTH MIAMI COMMUNITY TRANSIT CIRCULATOR STUDY

FINAL REPORT

City of North Miami

April 26, 2000

PRL & Associates, Inc. *with* NORTH MERIDIAN

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EXECUTIVE SUMMARY

This Study was commissioned to examine the transportation needs of the City of North Miami, and to prepare a comprehensive plan for the implementation of one or more circulators within the City of North Miami. The Study was funded through the FY 98 Miami-Dade County Metropolitan Planning Organization Municipal Grant Program. The City identified two specific objectives to be met by a municipal circulator program:

- ▶▶ To provide transit services tailored to the needs of residents unable to provide their own transportation; for use as a convenience and courtesy service; and by the general public service, to improve their quality of life, to provide a sense of community by creating a city bus loop system, and to assist businesses via circulator which allows for greater ease of customer travel, and
- ▶▶ To attract new segments of the population to public transit, thereby reducing single occupant vehicle usage, and implementing the Transportation Demand Management initiatives of the City, Miami-Dade County, and the State of Florida. Specifically, the City of North Miami municipal circulator program will interface with pedestrians, other municipal and Unincorporated Miami-Dade County (UMSA) circulators, and the county-wide bus systems at critical locations (i.e. Biscayne Boulevard/125th Street, NE 6th Avenue/125th Street).

During the course of the Study, the City reviewed and analyzed the following information:

- ▶▶ 1990 census data; census updates from the City of North Miami and Miami-Dade County (MDC) Planning
- ▶▶ MDC and North Miami Comprehensive Development Master Plans (CDMP)
- ▶▶ MDC Transportation Improvement Plan (TDP) for FY 98
- ▶▶ Northeast Miami-Dade Transit Improvement Study Recommendations and Technical Memoranda, including detailed route analyses
- ▶▶ Miami-Dade Transit Agency (MDTA) 1993 Onboard Survey
- ▶▶ North Miami Downtown Action Plan; Florida Department of Transportation West Dixie Highway Arterial Analysis (1991); MDC North Miami Traffic Study (1995)

Interviews were conducted with MDTA, City of North Miami, North Miami Foundation, Miami-Dade School Board, and Johnson & Wales University staff. A survey was developed and distributed to Johnson & Wales University students and to selected

North Miami residents. The City held public hearings during the Study, to obtain preliminary data and to review proposed route alignments.

Background

The North Miami Study continues the implementation of the 1995 Miami-Dade Transit Agency *Northeast Dade Transit Improvement Study* (NEDTIS). The primary objectives of the NEDTIS were to:

- ▶▶ develop a coordinated and effective public transportation network to meet current transit needs and attract new transit riders in Northeast Miami-Dade, and
- ▶▶ integrate improvements into applicable County Transportation and Planning documents to support the future transit needs as the Northeast Miami-Dade community changes and grows.

The NEDTIS recommended the creation of a three-tier system of transit services. The first tier would provide “premium,” limited express service to downtown Miami, Miami Beach and other employment centers within the County; the second tier would continue traditional regional bus service, and the third tier (circulators) is intended to offer neighborhood services to the local community. Since publication of the NEDTIS, the County has provided municipal grant funding to cities wishing to develop municipal circulators. This included North Miami Beach, Aventura, Sunny Isles Beach, and North Miami.

City Characteristics

The City of North Miami is located in central northeast Miami-Dade County. The 1995 population, according to the South Florida Regional Planning Council, is approximately 51,000, making North Miami the fourth largest City in Miami-Dade County. Current projections suggest that, by the year 2010, over 65,000 people will reside within the City limits. The City has a rich diversity of residents, including Hispanics, Caribbeans, African-Americans, and non-Hispanic whites. Approximately 19% of the residents are 60 or older, and 25% of the population is school-aged. Almost 14% of the households are at or below the poverty level. City data indicates that there is a trend for younger families to move into the City, indicating an increased need for day care, after school activities and summer programs for children. Housing stock includes a mix of single-family homes, apartment buildings and condominiums.

The City offers a mix of office space, manufacturing, and warehousing within its boundaries, and is home to many of Florida’s film and music studios. There are no hospitals or major medical complexes within the City, and commercial shopping is concentrated primarily along Biscayne Boulevard, NW 7th Avenue and NW/NE 123rd Street.

The City has been successful in revitalizing depressed areas, as evidenced by the transformation of North Miami Hospital into Johnson Wales University. The City operates eleven parks and community centers, a museum of the arts and a library. There are five elementary, one junior high, and one high school within the City. The north campus of Florida International University is also located within the North Miami municipal boundaries. The North Miami Parks & Recreation Department work closely with the Miami-Dade County Public Schools to provide after school activities for North Miami residents.

Transportation Characteristics

Primary north-south arterials within the City include Biscayne Boulevard, W. Dixie Highway, N.E. 6th Avenue and SR 441 (NW 7th Avenue). The City's only east-west connector between Biscayne Boulevard and the Intracoastal, NW/NE 123rd Street, serves exclusively the medium to high residential uses that abut it. The City is divided by I-95, and the Florida Department of Transportation proposes to extend I-75 east to NW 119th Avenue and NW 27th Avenue. This extension is expected to increase significantly intracity and intercity traffic through the City.

The Miami-Dade Transit Agency provides bus service along major roadways within the City. Generally, regional Metrobus service provided within the City of North Miami is limited, with seven north-south and five east-west regional routes. One premium route, the Biscayne MAX, provides service during peak periods from Aventura, along Biscayne Boulevard through North Miami, to the Miami Central Business District, with stops at NE 151st Street, NE 135th Street and NE 123rd Street. Miami-Dade County has licensed six private jitneys to operate in the Greater North Miami area, five of which provide service along north-south arterials.

Although the City of North Miami has two small buses and a mini-van, the vehicles are used primarily to transport children on field trips and athletic events. The North Miami Foundation, an Alliance for Aging funded organization has two 13-passenger vans used primarily to transport frail homebound elderly residents to grocery stores, doctor's visits and other functions, weekdays from 9 - 4:30 only. The Foundation service area includes North Miami Beach, Aventura, and unincorporated Miami-Dade to the County line.

The limited transportation alternatives contribute to the ownership and use of automobiles within the City; 86% of the workforce drives to work; 73% of the workforce drives alone to work. Only 8% of the workforce use public transportation. The limited Metrobus service also restricts the ability of the City to get children and their parents to and from day care, after school activities and summer programs.

Transit Circulator Recommendations

The Study has recommended that the City implement two publicly available citywide circulator routes, to provide convenient services to three targeted groups:

- ♣ Senior Citizens
- ♣ Students
- ♣ Commuters with long walking distance to bus stops, poor pedestrian and transit amenities, or where low service frequency and duration was identified.

The two circulator routes will be coordinated to combine into a convenient city-wide shuttle that meets the needs of the City's residents, employees, and visitors. One circulator will serve primarily residents to the west of NE 8th Avenue (black and gold line, Figure ES-1), while the other would serve those primarily to the east (black and magenta line, Figure ES-1). The shuttles would connect adjacent to the City's library, availing riders to a safe and comfortable public building in which to wait during transfers. Riders of the North Miami circulators will be able to transfer to and from MDTA regional and premium service at several designated transfer points. The major transfer areas are identified in the figure ES-1 by the bus logos.

The City proposes to operate the vehicles for ten hours each day, Monday through Friday. For the first ninety days, the City will offer the service without charge, after which a fare will be implemented. A summary of the route characteristics is provided in the table on the following page.

For approximately the first year of service, the City intends to contract with a private vendor to provide vehicles and operate the service. Funding for the implementation phase technical assistance has been provided through the FY 2000 MPO Municipal Grant Program. The City will request funds from Miami-Dade County to offset operating costs.

Within the next year, the City plans to explore the purchase or lease of alternative fuel vehicles for the service, and will seek a distinctive vehicle design, such as a trolley. A private vendor will operate the transit service and collect required Federal, State and County transit information. The City will seek public and private grants to help fund acquisition of the alternative fuel vehicles. It is anticipated that, if funding becomes available in FY 2000, the service could begin as early as Summer 2000.

Preferred Alternative Transit Circulator **Characteristics**

	West Route	East Route
Destinations:		
School and Community	West Side Community Center Ben Franklin Elementary St. James School First Christian School Gratigny Elementary School North Miami Armory North Miami Library North Miami Junior High School North Miami Elementary School	Natural Bridge Elementary School North Miami Junior High School North Miami Armory North Miami Library St. Paul Learning Center North Miami City Hall Museum of Contemporary Art WJ Bryan Elementary School Gwen Margolis Community Center Johnson & Wales University
Parks	Oleander Park Sasso Pool Ben Franklin Pepper Park Griffing Park Gribble Pool Cagni Park	Besade Park Keystone Park Gribble Pool Cagni Park Enchanted Forest
Commercial Locations	Publix at NE 6 th Avenue North Miami Central Business Dist.	Biscayne Boulevard North Miami Central Business
Dist.	Post Office at NW 119 th Street	NE 6 th Av. Shopping
MDTA Bus Transfers	2, 9, 10, 16, 28, 75, 77, E, G	3, 9, 10, 16, 28, 75, 93, G
Total Distance	8.90 miles	9.90 miles
Distance and Time to Library Transfer:	from West: 7.65 miles 38 minutes from North: 1.25 miles 6 minutes	from South: 5.30 miles 27 minutes from North: 4.60 miles 23 minutes
Average Travel Speed (est.)	12 mph	12 mph
Total Travel Time (one way)	45 minutes	50 minutes
Headway (same direction, 1 bus)	1 hour, 30 minutes	1 hour, 40 minutes

I. INTRODUCTION

This report represents a preliminary analysis of the need and feasibility of public community transit services using minibuses, integrated with existing public and private transit services, to serve the City of North Miami and neighboring areas (Appendix A). The provision of coordinated community-level transit service supports the major recommendation of the Miami-Dade Transit Agency's (MDTA) 1995 *Northeast Dade Transit Improvement Study*.

The City identified three populations at greatest need for such service:

- | | |
|-----------------|--|
| Senior Citizens | Many cannot drive or have limited driving capabilities, that restrict their access to health care, shopping and socio-cultural locations, and affects their ability to live independently. |
| Students | Dade County Public Schools (DCPH) provides transportation to all school children who live more than 2 miles from their school, as well as those within the 2-mile boundary who are at risk due to difficult crossings and other obstacles. The City of North Miami Parks Department provides many after school activities, for which transportation is not provided. |
| Commuters | The Miami-Dade Transit Agency (MDTA) provides regional bus service throughout the City, and various private jitney companies augment the service in some areas. Neighborhoods where transit access is difficult because of long walking distances to bus stops, poor pedestrian and transit amenities, or low service frequency and duration, can be identified. |

The study identifies two major objectives:

1. To provide transit services tailored to the needs of the target populations identified above, to meet their basic transportation needs and improve their quality of life.

2. To attract new segments of the population to public transit, thereby reducing single occupant vehicle usage, and implementing the Transportation Demand Management initiatives of the City, Miami-Dade County, and the State of Florida.

Funding for this study has been provided through the FY 1998 Unified Planning Work Program (UPWP) Municipal Grant Program, administered through the Miami-Dade Metropolitan Planning Organization (MPO). The Municipal Grant Program uses Section 112 Federal Highway Administration Planning funds, to develop alternative strategies for community transportation improvements.

This final report documents work conducted during the study, and presents the preferred alternative and an operational plan and implementation schedule for circulator service for the City. The report includes the following chapters:

Chapter 1: **Introduction** – Current Section

Chapter 2: **Existing Conditions** – This section provides an analysis of the current state of conditions that correlate to the demand for transit circulator services, and impact their provision. Included are:

- Land Use Analysis
- Identification of Major Generators and Attractions
- Demographics
- Existing Transit Services: MDTA, jitney, other institutional services)
- Roadway Conditions

Chapter 3: **Target Population Needs** – Based on existing conditions data, the needs of the target populations are identified. Included are:

- Senior Citizen Needs
- Student and After-School Program Needs
- Commuter and Transit Transfer Needs

Chapter 4: **Transit Demand Characteristics** – This section summarizes attitudinal information obtained through two transit surveys to identify service

characteristics that will best meet the needs of the target riders, and the needs of the overall community.

- Chapter 5: **Public Input** – Having developed the basis for identifying needs of target populations and existing conditions information, this information will be presented at public meeting to develop meaningful comment towards developing service alternatives. The results of meetings are summarized.
- Chapter 6: **Service Alternatives Development** – This section develops conceptual alternatives for providing service. Included are general alignments, number of vehicles, general times and frequency of service, and estimated cost. The operational plan was developed after presentation of these alternatives at public workshops.
- Chapter 7: **Operational Plan and Implementation** – This section proposes refined routes, times of operation, number of vehicles, frequency and time between arrivals, bus stop locations, and general schedules, based upon the alternative selected.
- Chapter 8: **Funding Strategy** – This section provides cost estimates and a funding strategy, based upon the proposed operational plan and implementation schedule.

2. EXISTING CONDITIONS

This section summarizes the current conditions that affect the demand for and provision of transit circulator services. They include:

- Land Use and Density
- Location of Major Trip Generators and Attractors
- Density and Demography of Transit Dependent Populations
- Existing Transit Services
- Roadway Conditions

LAND USE AND DENSITY

One of the primary determinants of the need for and success of transit service is the character and density of land use. Mixed residential and commercial use areas tend to provide the greatest demand for transit services. The generalized land use map for the City of North Miami, Figure 2-1, provides both the type of use, and residential density for each block. Blocks with more than one use are colored according to their predominant use.

Most transit trips are classified as either home-based or chained. Home-based trips are trips from home to a single location, for any purpose (including commuting to work, shopping, medical appointments), and back. North Miami based responses from a 1993 MDTA transit rider survey indicate that an estimated 94% of all transit trips are home-based. Chained trips are a more recent phenomenon that increases the complexity of providing transit service over low and medium density areas, without central commercial districts. Chained trips are typically trips from home to multiple locations (e.g., for errands), and back.

Transit ridership increases significantly with residential density. Residential densities need to average at least seven dwelling units per acre (DU/Ac) to support a feeder bus service, and an average of fifteen DU/Ac to support high-frequency bus service. In Miami-Dade County, an overall density of twenty-three residents or employees per acre is a planning threshold used to determine the feasibility of basic bus transit according to FDOT's *Pedestrian and Transit Friendly Design*² by the Joint Center for Environmental and Urban Problems.

The Portland Oregon, Tri-Rail light rail system developed an evaluation of transit supportive land use, included in its 1993 report, *Planning and Design for Transit*.³ Land uses

were divided into three categories: the first considered to be intrinsically transit supportive, the second, transit supportive with appropriate development standards, and the third, not transit supportive. Table 2-1 lists these uses.

MAJOR TRIP ATTRACTORS

These large-scale institutions and centers of activity motivate a significant proportion of the target population's trip making activity. For the elderly, after school program participant, and commuter target populations, the major trip generators and attractors include:

- Schools
- Parks, Recreational Facilities, and Community Centers
- Shopping/Commercial Centers
- Hospitals and Major Medical Complexes
- Major intermodal transfer locations

Within North Miami, there are no hospitals or major medical complexes. These are primarily located to the north, in North Miami Beach and Aventura, and to the south in Miami, Miami Beach, and Kendall.

There are also no significant intermodal transfer locations, such as park-and-ride facilities, rail or train, or mass transit stations. The nearest intermodal centers are in Hialeah to the southwest, and at Golden Glades to the north. The Hialeah Metrorail Station includes connections to Tri-Rail and AmTrak. MDTA Route 28 provides service to the Hialeah Metrorail Station from Florida International University, Biscayne Boulevard from 151st Street to 135th Street, and along 135th Street in North Miami. Routes 77 and E access Golden Glades from NW 7th Avenue, NW 135th Street, and Opa Locka Boulevard.

**TABLE 2-1
TRANSIT SUPPORTIVE USES**

Land Use Category	Transit Supportive	May be Supportive	Not Supportive
Residential Uses			
Single-Family Residential (more than 5,000 sq.ft.)		√	
Single-Family Residential (less than 5,000 sq.ft.)	√		
Multi-Family Residential	√		
Elderly Residential	√		
Public and Semipublic			
Cemeteries			√
Clubs and Lodges		√	
Convalescent Facilities			√
Cultural Institutions	√		
Day Care General	√		
Government Offices	√		
Hospitals and Medical Offices	√		
Small Parks	√		
Large Parks, Playing Fields, Golf Courses		√	
Public Safety Facilities		√	
Residential Care		√	
Schools and Colleges		√	
Commercial Uses			
Banks and Savings and Loans	√		
Building Materials and Services		√	
Commercial Recreation and Entertainment		√	
Eating and Drinking Establishments	√		
Fast Food, Take Out, and Drive Throughs		√	
Bars and Taverns	√		
Funeral and Internment Services			√
Laboratories		√	
Maintenance and Repair Services		√	
Business and Professional Offices	√		
Research and Development Services		√	
Retail Services	√		
Volume Discount Retail		√	
Travel Services	√		
Vehicle Equipment Sales and Services			√
Service Stations		√	
Hotels	√		
Bed and Breakfast Inns	√		
Motels		√	
Industrial Uses			
Heavy Industrial and Truck Stops			√
Light Industrial			√

Figure 2-1

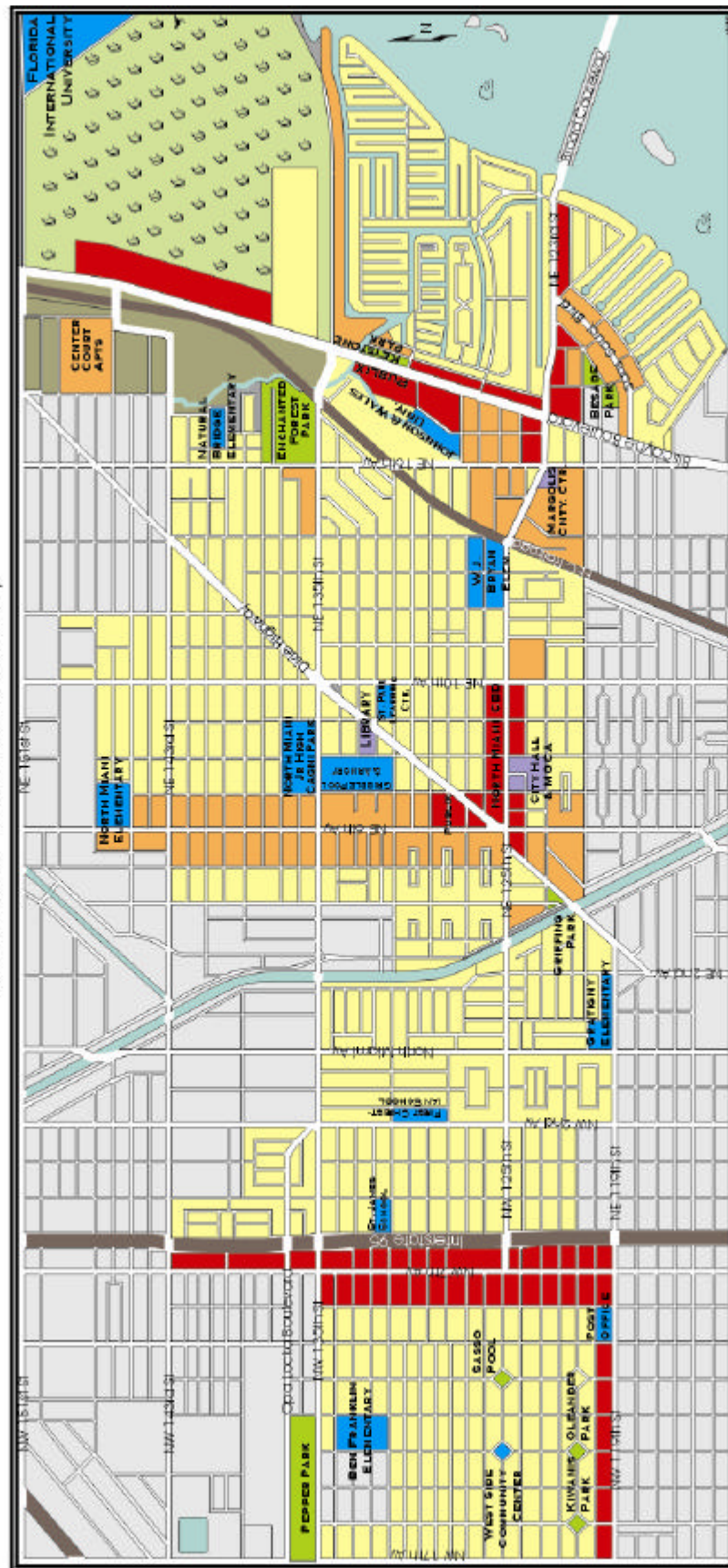


Figure 2-2 illustrates the major trip attractors within the City of North Miami. They include:

Shopping Commercial Centers (red)

- North Miami Central Business Dist. (CBD)
- NE 123rd Street Shopping Center
- Biscayne Boulevard shopping centers

Civic Centers (lavender)

- North Miami City Hall
- North Miami Library
- Museum of Contemporary Art (MOCA)
- West Side Community Center
- Gwen Margolis Community Center

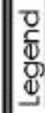
Parks (green)

- Claude Pepper Park
- Kiwanis Park
- Enchanted Forest Elaine Gordon Park
- Besade Park/Sans Souci Tennis Center
- Ray Cagni Park & Gribble Pool
- Oleander Park
- Sasso Park and Pool
- Griffing Park
- Keystone Park

Schools (blue)

- Benjamin Franklin Elementary
- Gratigny Elementary
- Natural Bridge Elementary
- North Miami Elementary
- North Miami High
- North Miami Junior High
- William Jennings Bryan Elementary
- Johnson and Wales University

Figure 2-2



DEMOGRAPHICS

The key demographic factors that influence the need for transit services are those that generally identify the transit dependent and/or individuals less capable of providing for their own transportation needs. These include:

- Senior Population, 60 or 65 years and older
- Senior Population with Disability
- Senior Population in Labor Force and Prevented from Working by Disability
- School-Age Population, between 5 and 19 years old
- School Enrollment, public and private
- Single Heads of Households with Children under 18 years
- College Enrollment
- Household Income
- Household Income Type (Social Security without Retirement)
- Poverty Status
- Number of Vehicles in Household
- Means of Transportation to Work

The density of these populations within a community indicates the need for certain transit services. While overall population density is also a good indicator, its influence is more accurately captured through spatial patterns of dwelling unit density as illustrated in the general land use map.

The City has defined community populations by Planning Sectors; each comprised of several census tracts that characterize homogeneous populations. As such, the Planning Sectors roughly describe the City's identifiable neighborhoods. There are seven Planning Sectors within the City. Figure 2-3 displays the Planning Sector areas and boundaries. Table 2-2 summarizes key demographic by Planning Sector, and as an aggregate for the whole City. Both population numbers and percentages are reported.

The information is based on the 1990 Census which is the best data currently available. The population data has not been adjusted to 1999 populations because migration data and additional cross-correlated data are not available. Although demographic changes have occurred, the data still provides reasonable indices of transportation need. Section

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Table 2-2
Key Transit Demographic Indicators
 Page 1 of 2

Select Demographic Summary by Planning Sector, City of North Miami, 1990 Census															
Demographic Variable	Planning Sector 1		Planning Sector 2		Planning Sector 3		Planning Sector 4		Planning Sector 5		Planning Sector 6		Planning Sector 7		City-Wide
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Total Population	7,737		5,378		8,138		4,756		10,266		6,666		7,057		49,988
Male	3,601	47%	2,616	49%	3,808	47%	2,255	47%	4,818	47%	3,176	48%	3,386	48%	23,660
Female	4,136	53%	2,762	51%	4,330	53%	2,501	53%	5,448	53%	3,490	52%	3,671	52%	26,338
Age															
Under 5 years	334	4%	383	7%	531	7%	418	9%	915	9%	495	7%	632	9%	3,708
5 to 9 years	245	3%	216	4%	479	6%	379	8%	683	7%	521	8%	645	9%	3,168
10 to 14 years	213	3%	208	4%	403	5%	330	7%	559	5%	533	8%	590	9%	2,896
15 to 19 years	273	4%	247	5%	316	4%	345	7%	519	5%	485	7%	581	8%	2,766
Total School Age (5 - 19)	1,065	14%	1,054	20%	1,729	21%	1,472	31%	2,676	26%	2,034	31%	2,508	36%	12,538
60 to 64 years	505	7%	177	3%	311	4%	156	3%	359	3%	302	5%	266	4%	2,076
65 to 74 years	950	12%	305	6%	653	8%	310	7%	677	7%	527	8%	423	6%	3,845
75 to 84 years	774	10%	201	4%	669	8%	162	3%	452	4%	250	4%	193	3%	2,701
85 years and older	192	2%	123	2%	308	4%	36	1%	202	2%	81	1%	49	1%	991
Total Senior Population	2,421	31%	806	15%	1,941	24%	664	14%	1,680	16%	1,160	17%	931	13%	9,613
Household Type															
Persons per Household	1.94		2.09		2.12		2.77		2.39		3.12		3.55		2.44
Persons per Family	2.65		3.00		3.04		3.55		3.19		3.66		4.02		3.27
Total Households	4,082		2,487		3,457		1,663		4,220		2,124		1,985		20,018
Total Non-Family Households	2,002	49%	1,308	53%	1,704	49%	500	30%	1,687	40%	1,431	20%	352	18%	7,984
Total Family Households	2,080	51%	1,179	47%	1,753	51%	1,163	70%	2,533	60%	1,693	80%	1,633	82%	12,034
Married	1,723	42%	847	34%	1,086	31%	810	49%	1,584	38%	1,214	57%	1,061	53%	8,325
Total Households with Children	603	15%	579	23%	894	26%	551	33%	1,248	30%	850	40%	948	48%	5,673
Married with Children under 18 years	505	12%	362	15%	507	15%	419	25%	741	18%	594	28%	619	31%	3,747
Male Householder, no wife, and children under 18 years	0	0%	18	1%	98	3%	40	2%	119	3%	39	2%	123	6%	437
Female Householder, no husband, and children under 18 years	98	2%	199	8%	289	8%	92	6%	388	9%	217	10%	206	10%	1,489
Non-Household Persons															
Persons in group quarters or institutionalized (percent of pop.)	0	0%	231	4%	437	5%	0	0%	205	2%	2	0%	12	0%	887
School Enrollment															
Public Preschool	22	7%	26	7%	67	13%	37	9%	77	8%	54	11%	40	6%	323
Private Preschool	80	24%	16	4%	50	9%	98	23%	102	11%	67	14%	97	15%	510
Public Elementary / High	439	60%	631	94%	982	82%	733	70%	1,561	89%	1,407	91%	1,487	79%	7,240
Private Elementary / High	277	38%	52	8%	110	9%	47	4%	195	11%	132	9%	195	10%	1,008
Total Public School	461	43%	687	62%	1,049	61%	770	52%	1,638	61%	1,461	72%	1,527	61%	7,563
Total Private School	357	34%	68	6%	160	9%	145	10%	297	11%	199	10%	292	12%	1,518
Total Enrollment, and Percentage of School Age Children	818	77%	725	69%	1,209	70%	915	62%	1,935	72%	1,660	82%	1,819	73%	9,081
Enrolled in Public College	327	77%	502		556		415		752		380		474		3,406
Enrolled in Private College	232		182		143		38		150		155		131		1,031
65 Years and Older Work and Disability Characteristics															
65 years and older	1,941		414		1,218		520		1,125		836		689		6,743
No work disability	1,464	75%	284	69%	890	73%	357	69%	751	67%	619	74%	492	71%	4,857
In labor force with no work disability	226	15%	76	27%	261	29%	50	14%	167	22%	115	19%	74	15%	969
Employed	209	92%	76	100%	210	80%	34	68%	157	94%	115	100%	74	100%	875
Unemployed	17	8%	0	0%	51	20%	16	32%	10	6%	0	0%	0	0%	94
Not in labor force, no work disability	1,238	85%	208	73%	629	71%	307	86%	584	78%	504	81%	418	85%	3,888
With a work disability	477	25%	130	31%	328	27%	163	31%	374	33%	217	26%	197	29%	1,886
In labor force and unemployed	9	2%	0	0%	0	0%	6	4%	0	0%	0	0%	0	0%	15
Not in labor force - Prevented from working	339	71%	111	85%	244	74%	99	61%	329	88%	183	84%	161	82%	1,466
Not in labor force - Not prevented from working	80	17%	10	8%	72	22%	30	18%	39	10%	18	8%	36	18%	285

Table 2-2
Key Transit Demographic Indicators
Page 2 of 2

Continuation - Select Demographic Summary by Planning Sector, City of North Miami, 1990 Census																
Demographic Variable	Planning Sector 1		Planning Sector 2		Planning Sector 3		Planning Sector 4		Planning Sector 5		Planning Sector 6		Planning Sector 7		City-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Vehicle Availability																
No vehicles in household	321	8%	246	10%	706	20%	288	17%	647	15%	176	8%	178	9%	2,562	9%
1 vehicle per household	2,172	54%	1,415	56%	1,852	53%	649	39%	2,163	50%	688	32%	722	36%	9,661	36%
2 or more vehicles per household	1,543	38%	858	34%	943	27%	720	43%	1,487	35%	1,270	60%	1,083	55%	7,904	55%
Means of Transportation to Work																
Population - Workers 16 years and older	4,311		3,110		3,703		2,101		4,864		3,008		3,022		24,119	
Drive Alone	3,252	75%	2,460	79%	2,628	71%	1,545	74%	3,223	66%	2,339	78%	2,077	69%	17,524	72%
Carpool	506	12%	368	12%	519	14%	244	12%	730	15%	407	14%	517	17%	3,291	14%
Public Transportation	186	4%	218	7%	294	8%	215	10%	562	12%	171	6%	310	10%	1,956	8%
Bicycle	8	0%	12	0%	33	1%	16	1%	43	1%	15	0%	5	0%	132	0%
Walk	60	1%	23	1%	114	3%	62	3%	148	3%	32	1%	19	1%	458	2%
Other Means	62	1%	0	0%	26	1%	11	1%	49	1%	0	0%	19	1%	167	1%
Work at Home	225	5%	29	1%	89	2%	0	0%	109	2%	44	1%	75	2%	571	2%
Total Transit, Bicycle, Walk, Carpool (1/2), Other that do not work at home	669	13%	437	14%	727	20%	426	20%	1,167	24%	422	14%	612	20%	4,359	18%
Income (1989)																
Household Median	\$29,419		\$23,542		\$22,613		\$27,047		\$20,650		\$29,489		\$28,430		\$24,898	
Household Mean	\$53,236		\$27,452		\$25,658		\$28,448		\$24,553		\$33,381		\$31,040		\$32,891	
Family Median	\$41,990		\$24,621		\$27,023		\$28,820		\$23,634		\$31,270		\$30,650		\$28,424	
Family Mean	\$70,005		\$30,889		\$30,754		\$30,260		\$27,699		\$35,393		\$32,656		\$37,761	
Non-Family Median	\$21,162		\$22,899		\$16,754		\$19,612		\$16,099		\$20,738		\$14,935		\$18,274	
Non-Family Mean	\$35,602		\$23,611		\$19,613		\$20,856		\$18,392		\$22,639		\$17,180		\$24,153	
Household Per Capita	\$28,223		\$13,036		\$11,457		\$10,031		\$10,094		\$10,608		\$8,655		\$13,297	
Household Income Type (1989)																
Households with earnings	3,000		2,263		2,769		1,430		3,421		1,805		1,711		16,399	
Households with public assistance income	45	2%	106	5%	169	6%	49	3%	254	7%	168	9%	133	8%	924	4%
Households with Social Security income	1,360	45%	331	15%	961	35%	403	28%	1,058	31%	661	37%	459	27%	5,233	21%
Households with retirement income	486	16%	138	6%	338	12%	225	16%	402	12%	259	14%	159	9%	2,007	8%
Poverty Status (1989)																
Married with Children under 5 years	12	2%	0	0%	31	6%	8	2%	32	4%	0	0%	17	3%	100	0%
Married with Children under 18 years	29	6%	23	6%	74	15%	49	12%	96	13%	67	11%	92	15%	430	2%
Male Householder, no wife, and children under 5 years	0	0%	8	44%	0	0%	0	0%	0	0%	0	0%	8	7%	16	0%
Male Householder, no wife, and children under 18 years	0	0%	8	44%	10	10%	0	0%	27	23%	16	41%	18	15%	79	0%
Female Householder, no husband, and children under 5 years	0	0%	15	8%	12	4%	27	29%	28	7%	12	6%	12	6%	106	0%
Female Householder, no husband, and children under 18 years	46	47%	92	46%	96	33%	61	66%	162	42%	67	31%	83	40%	607	3%
60 years and over (persons)	209	9%	72	9%	215	11%	69	10%	181	11%	80	7%	154	17%	980	4%
75 years and over (persons)	150	16%	32	10%	108	11%	7	4%	71	11%	0	0%	19	8%	387	2%

EXISTING TRANSIT SERVICES

Five categories of transit providers currently serve the City of North Miami:

- Miami-Dade Transit Agency (MDTA) regional bus services
- MDTA Special Transportation Services (STS)
- privately owned jitney services,
- private institutions, and
- City of North Miami Park & Recreation

MDTA Buses

MDTA provides regional bus service throughout North Miami using both full size and articulated buses. MDTA buses are too large for the small streets of many residential areas, and contribute disproportionately to noise and atmospheric pollution. MDTA charges a general fare of \$1.25 and a senior citizen discounted fare of \$.60 per boarding. Discounted transfer passes are available for both seniors and disabled persons. A senior citizen with an annual household income under \$20,000 can obtain a “Golden Pass,” permitting use Metrobus, Metrorail, and Metromover without charge. Individuals who qualify as disabled under the Americans with Disabilities Act may also ride Metrobus, Metrorail, and Metromover without charge.

Transfers from Metrobus are available to Miami-Dade County’s Metrorail and Downtown Metromover, to Broward County Transit (BCT) buses, and TriRail (the regional commuter rail line). Metrobus passengers may also transfer to other newly implemented municipal and regional circulator routes such, as the Electrowave in Miami Beach, the North Miami Beach Circulator (NMB Line), and the Northeast Dade and the North Dade Connections. None of the municipal services currently transfer at locations within the City of North Miami. Some of the area jitney services accept transfers from MDTA Metrobus.

Fourteen regional bus routes (Tables 2-3 and 2-4) serve the City of North Miami. Major destinations are identified, as well as peak and off-peak capacity and headway (time between bus arrivals). Other quality of service indices will be addressed in Section 4, Transit Demand Characteristics.

Fourteen regional bus routes (Tables 2-3 and 2-4) serve the City of North Miami. Major destinations are identified, as well as peak and off-peak capacity and headway (time between bus arrivals). Other quality of service indices will be addressed in Section 4, Transit Demand Characteristics.

STS

MDTA also provides Special Transportation Services (STS) to mobility impaired persons who cannot access Metrobus vehicles and/or routes, and who are unable to access Metrorail and/or Metromover. STS provides shared ride, demand response transportation to individuals who have made reservations twenty-four hours or more in advance. Riders may use the STS “subscription service,” which provides pre-scheduled five-day a week pickups.

The cost to MDTA of a one-way STS trip is approximately \$17.00. STS users pay a base fare of \$2.50 per one-way trip, and an additional charge of \$.50 for each transfer normally required on equivalent fixed-route service, to a maximum of \$4 per one-way trip. These charges offset the MDTA cost per trip. Because STS services are so costly, municipal and neighborhood circulators may provide additional alternative public transit services.

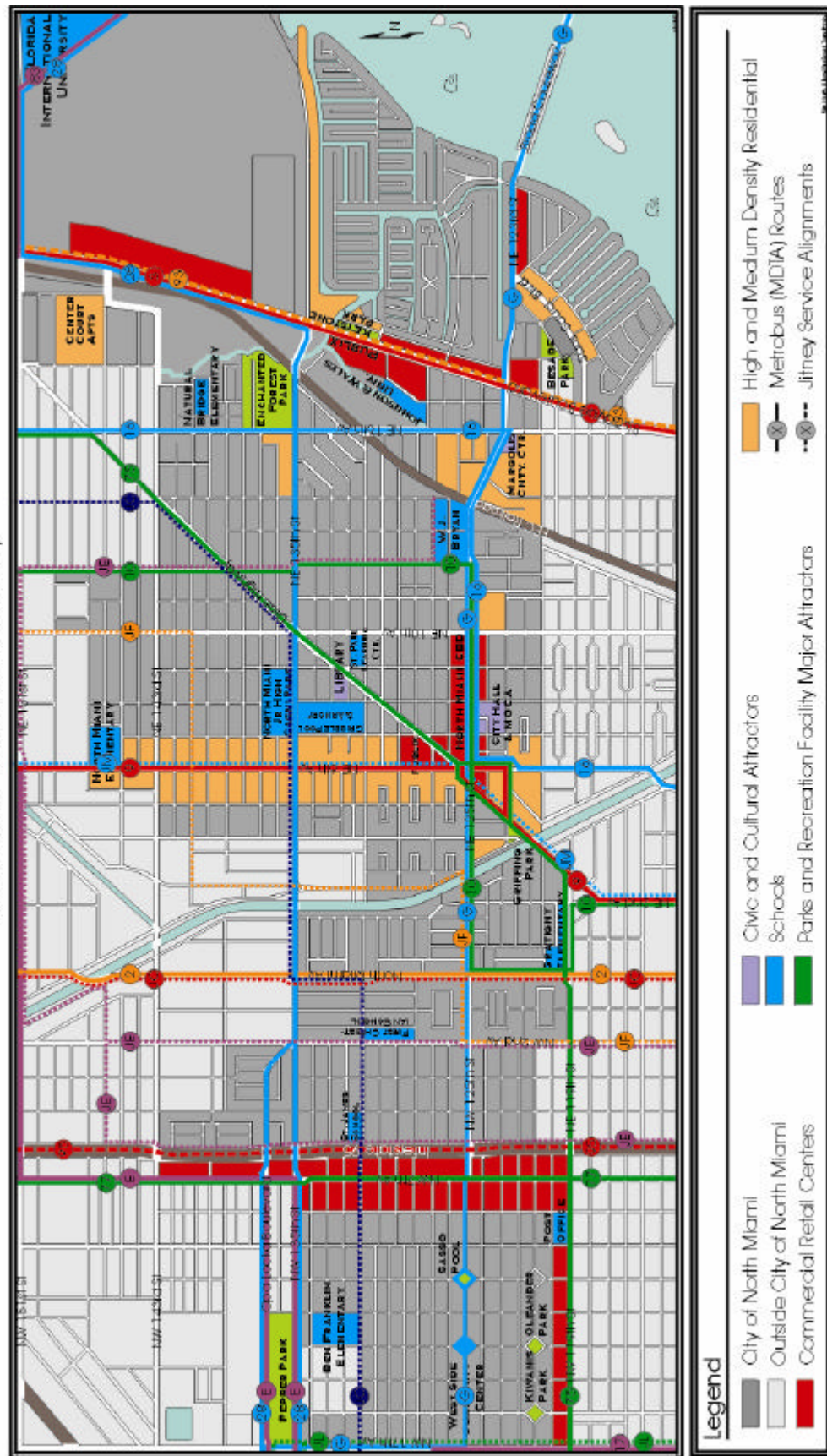
Jitneys

Jitneys provide semi-demand response service (no fixed stops - they are flagged down) along fixed routes, using minivan type vehicles. They charge the same fare as MDTA buses. Six regulated jitney companies provide jitney services in North Miami:

- Miami Mini Bus
- Liberty City Jitney
- Marcello Jitney
- Conchita's Transit Express
- Excel Jitney
- Florida Jitney

Jitney routes and service characteristics are included in Figure 2-4, and Table 2-3. Most jitney service characteristics are unknown. Service frequency along some corridors such as NE 2nd Avenue and Miami Avenue appear to exceed MDTA service.

Figure 2-4
City of North Miami Existing Transit Services
North Miami Transit Circulator Study



**Table 2-3
Existing Transit Service Characteristics**

Route		Map Color		Type of Service		Primary Corridor in North Miami		Direction in North Miami		Regional Destinations		Regional Destinations		Ridership Profile (1994 survey)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
														Operational Service Span		Peak Headway		Off-Peak Headway		Night Time Headway		Weekend Headway		NE Dade Avg. Daily Ridership		Ridership Percentage		Primary Cohort Age		Primary Trip Purpose		Secondary Trip Purpose		Alternative Transit Use		Primary Rider Concern																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
2	orange	regular	regional	N. Miami Avenue	North-South	163rd Street Shopping Center	Downtown Miami	17.5 hours	60 min.	60 min.	60 min.	No Service	1,189	5%	20-39	home/ work	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ shopping	home/ 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Private Transit Services

Regional medical centers, nonprofit agencies, and some condominium associations within Northeast Dade provide private transit services designed to meet the specific needs of the operating organization's clients. Generally, services are fully demand responsive, requiring the rider to call a dispatcher in advance. Regional medical centers often transport their clients to a single destination. These services are unavailable to the general public.

The nonprofit North Miami Foundation, located in the City of North Miami, provides demand response transportation to assist seniors in remaining independent and in their homes. Clients must reside in within the geographic area bounded by 87th Street (south), NW 17th Avenue (west), Broward County line (north), and Atlantic Ocean (east). The Foundation minibus serves different semi-fixed areas each day of the week, primarily transporting residents grocery shopping, and secondarily, to medical appointments. It does not charge for its services but accepts donations. While many of its passengers reside in single family dwellings, Foundation staff identified several complexes with predominantly elderly residents. These include:

- San Souci area (east of Biscayne Boulevard, south of 123rd Street);
- 135th Street east of Biscayne Boulevard
- El Presidente apartments
- Three Horizons Condominium

Foundation staff advised that their transportation services do not adequately meet identified community needs. Specifically, they do not have sufficient resources to take residents for food stamps, to apply for and receive welfare, to pick up goods at the South Florida Food Recovery Program, or for most "quality of life" services.

City of North Miami Parks & Recreation

The City of North Miami Parks & Recreation has two vehicles, used primarily to take children to after school programs and to competitive events at neighboring schools and City parks. These activities generally last no later than 9:30 PM, with parents responsible for providing transportation home. During the summer, the City operates summer camp programs at three locations: West Side Park, Keystone Park, and the Enchanted Forest. The City provides limited transportation to and from the summer camp locations. The City offers differing programs for adults and children at its various park sites and community center, but does not offer transportation between locations.

City Parks & Recreation staff suggested that more children could take part if transportation were available to take children home from after school events and activities. A City operated minibus could allow residents to more frequently visit the library, attend classes and events at Florida International University, or take their children to the in-line skating rink, the City wet tot lot, and other locations.

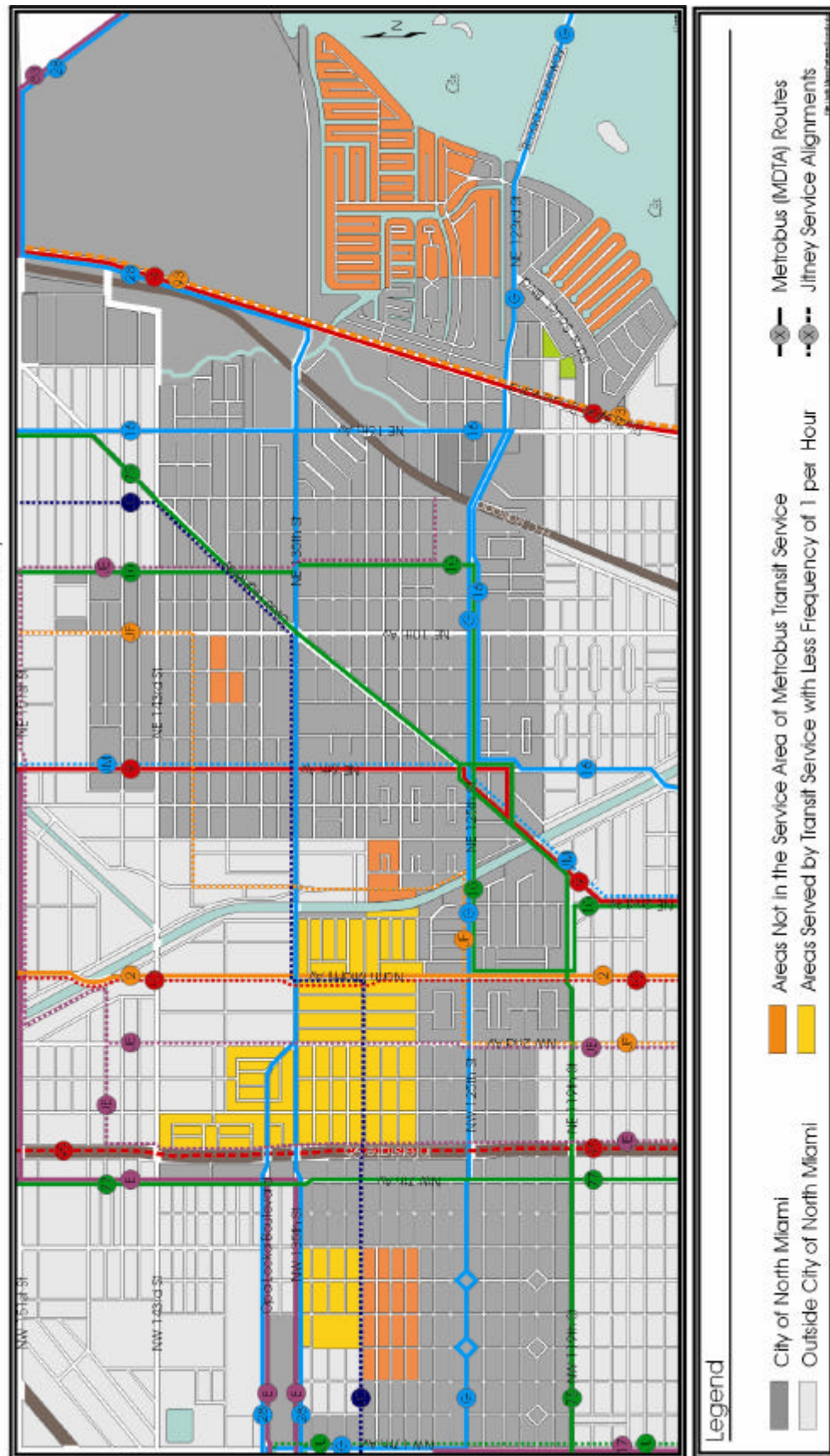
Transit Service Area Coverage

Transit service area coverage is the land around a transit stop encircled by a band with a 1,000-foot. When mapped, this band provides a rough, visual measure of the availability of transit service throughout an area, and quickly shows areas where transit service can be considered too far away for people to walk.

As an aggregate measure however, it does not fully demonstrate the availability of service. For example, frequent bus arrivals, and multiple routes to various destinations may serve one covered block, while a single route with sixty-minute intervals between arrivals, may serve another covered block. Both will be shown within the transit service area, yet they represent widely varied levels of and demands for service.

A better measure of transit service coverage needs is shown in Figure 2-5. Orange blocks define those areas more than 1,000 feet from any MDTA regional bus line. They can be considered without service. Gold-colored blocks illustrate those that are near one or more MDTA transit lines with service frequencies less than two per hour (30-minute headways) during off-peak times (senior citizens and students tend to travel at off-peak hours). These areas can be considered to have low levels of service.

Figure 2-5
City of North Miami Existing Transit Service Coverage Deficiencies
North Miami Transit Circulator Study



ROADWAY CONDITIONS

Existing roadway conditions affect a community's ability to provide efficient transit service. Roads that are less congested allow greater freedom and maneuverability for transit vehicles to make stops and conform to a schedule. Congested roads impede the progress of the transit vehicle, affecting travel time, and reliability and indirectly, the public's perception of the desirability of public transit services. Because community transit circulator services use small minivan type vehicles, local roads can be traveled with little negative impact to neighborhoods. Many congested segments and intersections of the City's major arterial and collector roads can be avoided by the use of alignments along local roads.

Neighborhood Cut-Through Impacts

Neighborhoods within the city have identified areas where traffic calming techniques or road closures may be implemented. In these areas, special attention is given to planning community transit services if needed, and particular attention will be given during public input. These areas include:

- | | |
|---------------------|---|
| Breezeswept Estates | Public rights-of-way within the area north of NE 119 th Street to NE 135 th Street, and from NE 2 nd Avenue on the east to North Miami Avenue on the west. |
| Overbrook Shores | Public rights-of-way within the area north of NE 119 th Street to NE 121 st Street, and from NW 2 nd Avenue on the west to North Miami Avenue on the east. |
| Executive Manors | Public right-of-way along NE 142 nd Street, from NE 16 th Avenue to NE 18 th Avenue. |

North Miami Downtown Action Plan Recommendations

The *North Miami Downtown Action Plan* provides recommendations for downtown revitalization and street improvements. This includes proposals to improve parking and roadway conditions along NE 125th Street from NE 4th Avenue to NE 9th Avenue and along NE 8th Avenue, south of NE 125th Street. Improvements are proposed for NE 125th Street intersections at Dixie Highway, NE 8th Avenue, and NE 9th Avenue. The Plan also includes traffic calming strategies for the NE 125th Street business district.

The Action Plan gives particular attention to parking. While most parking is located on side streets and behind stores, the availability and visibility of storefront parking is

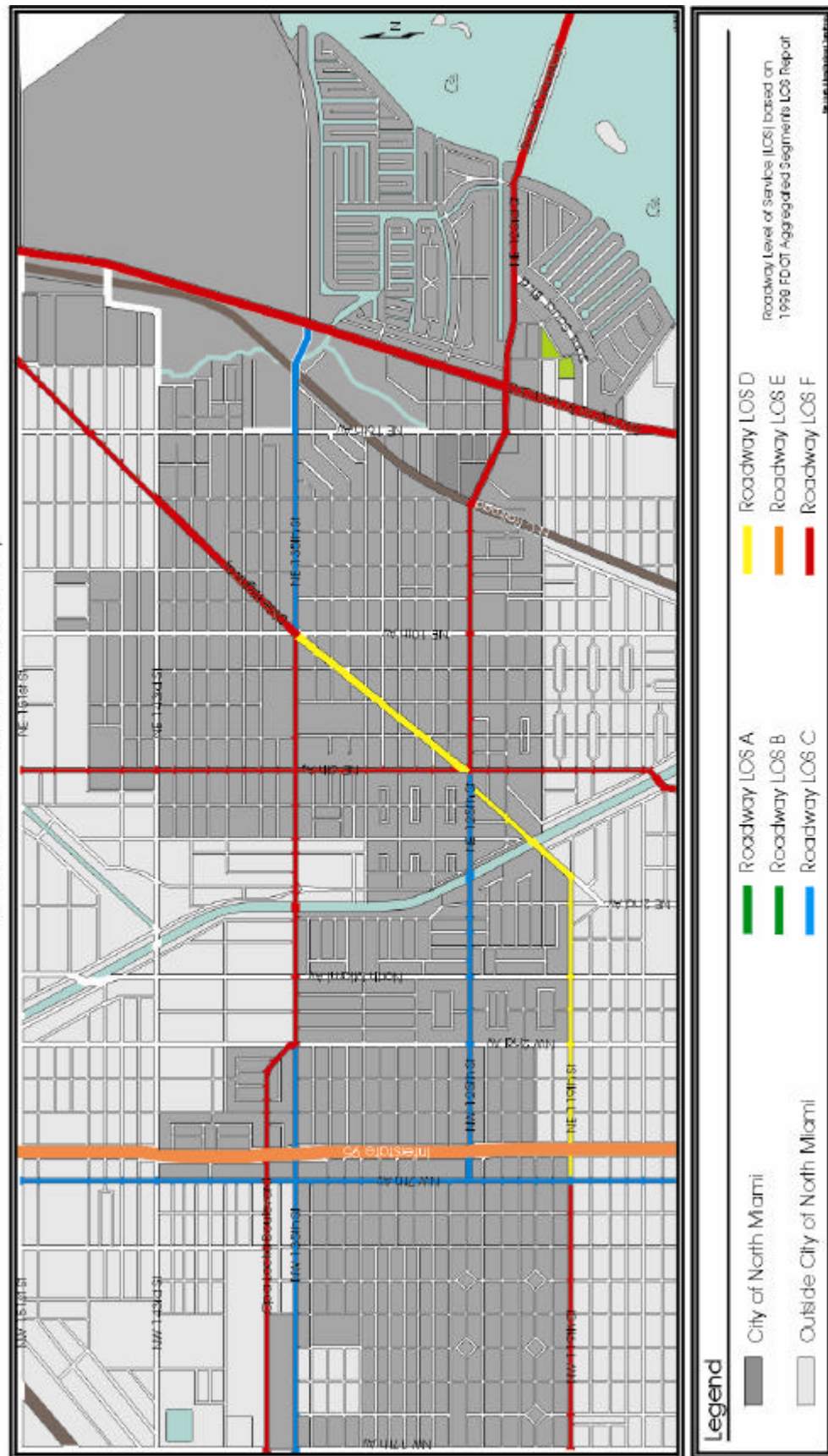
essential to many businesses. Special consideration to the efficient location of bus stop must be given to the NE 125th Street Downtown District.

Major Roadway Level-of-Service

Level-of-Service (LOS) is a measure used to define a range of traffic conditions along arterial and collector roadway segments and at major intersections. Six levels-of-service are defined and designated A to F. LOS A designates the best operating conditions, characterized by free, uninterrupted flow of traffic, with minimal delays. LOS F designates the worst conditions, characterized by heavy congestion with long delays, especially at intersections. As a general measure of driver satisfaction correlating to vehicle density, speed, delay, and the ability to maneuver, LOS along roadway segments and at intersections suggests the relative ease of difficulty with providing transit service along those streets. LOS measures are not generally applicable to local and residential streets, for which standards relating the volume and speed of vehicles to safety and quality of life are more typically used.

Figure 2-6 illustrates the arterial and collector roadways within the City. Levels of service are shown for the major, state-maintained facilities, and are based on the Florida Department of Transportation's Aggregated Segments LOS. Aggregated Segments LOS is used for planning purposes only and is not a useful for determining site level transportation impacts.

Figure 2-6
City of North Miami Existing Roadway Deficiencies
North Miami Transit Circulator Study



3. TARGET POPULATION NEEDS

While the circulator will provide publicly available transit, services will be designed to meet the needs of the populations with the greatest transportation needs: senior citizens, students who attend after school programs and commuter transfers.

Target rider demographic indicators have been developed based on the cross-correlated demographic statistics (assuming homogeneous distributions) discussed in Chapter 2. These indicators provide a ranking of need for each of the three target populations. The indicators are summarized as a simple multinomial addition of populations, with each population base weighted by a 0.1 factor (suggests that 10% of the elderly, school age, and commuter populations are expected to utilize the service). Demographic indicators and scores for each Planning Sector, appear in Table 3-4. Cumulative results, by Planning Sector, appear in Figure 3-1.

SENIOR CITIZENS

Many seniors cannot drive, or have limited driving capabilities. The proposed service is intended to enable such seniors to prolong an independent life style by providing access to basic services as well as to socio-cultural opportunities. The demographic indicators include:

- Residents 65 years and older
- Residents 65 years and older, who are unemployed by disability, and likely to have no vehicles in the household
- Residents 65 years and older, who are not in the labor force, because they are prevented from working by disability
- Residents 65 years and older, who are employed without disability, and likely to have no vehicles in the household
- Households with Social Security income, but without retirement income, and likely to have no vehicles in the household
- Residents at or below poverty level, 60 years and older
- Residents at or below poverty level, 75 years and older

The cumulative results of the scored indicators are displayed in Table 3-1, showing the number of target individuals for each Planning Sector, and the sector's comparative need rank.

Table 3-1
Senior Citizen Target Population and Ranking, By Planning Sector

Planning Sector	Target Population	Need Rank
1	664	2
2	204	6
3	703	1
4	182	7
5	557	3
6	224	5
7	288	4

STUDENTS WHO ATTEND AFTER SCHOOL PROGRAMS

Miami Dade County Public Schools provides for transportation to all school children that live more than 2 miles from their school, as well as those within the 2-mile boundary that are at risk due to difficult crossings and other obstacles. The City Parks Department provides a variety of after school activities and programs for which public transportation is unavailable. The community circulator is intended to provide safe transportation to and from these activities. The demographic indicators include:

- School age children enrolled in public and private schools (10%)
- School age children enrolled in school, and likely to belong to families that commute by transit, bicycle, walking, or other non-private vehicle means
- School age children enrolled in school, that are likely to belong to single parent families, and likely to have no vehicles in the household
- School age children enrolled in school that are likely to belong to married families with income below the poverty level
- School age children enrolled in school that are likely to belong to single parent families with income below the poverty level

The cumulative results of the scored indicators are displayed in Table 3-2, showing the number of target individuals for each Planning Sector, and the sector's comparative need rank.

Table 3-2
Student After School Program Target Population and Ranking, By Planning Sector

Planning Sector	Target Population	Need Rank
1	202	7
2	334	6
3	776	3
4	524	5
5	1,136	1
6	575	4
7	916	2

COMMUTERS

MDTA provides regional bus service throughout the City, supplemented by six regulated jitney companies and a mix of institutional, agency, commercial and residential entities serving client populations. Areas where transit access is difficult because of long walking distances to bus stops, poor pedestrian and transit amenities, or low service frequency and duration, can be identified. Transit service area coverage indicators are an additional tool for identifying unserved or under-served areas. Community circulators can provide transfer links to such areas, resulting in enhanced service and greater ridership potential.

Additional data and information relating to specifically stated preference characteristics and spatial patterns of transit transfer demand are summarized in Section 4, Transit Demand Characteristics.

The demographic indicators include:

- Workers 16 years old and older (base population not included, 0%)
- Workers that report using public transportation (all public transit modes)
- Workers that walk to work
- Workers that carpool to work (10% target group - approximately half are drivers)
- Workers that bicycle to work (10% target group - likely riders only in bad weather)
- College students who are likely to have no vehicle in the household

The cumulative results of the scored indicators are displayed in Table 3-3, showing the number of target individuals for each Planning Sector, and the sector's comparative need rank.

Table 3-3 Commuter Target Ridership and Ranking, by Planning Sector		
Planning Sector	Target Population	Need Rank
1	342	6
2	346	5
3	604	2
4	382	4
5	923	1
6	289	7
7	436	3

Figure 3-1
City of North Miami Target Ridership Indicators
North Miami Transit Circulator Study

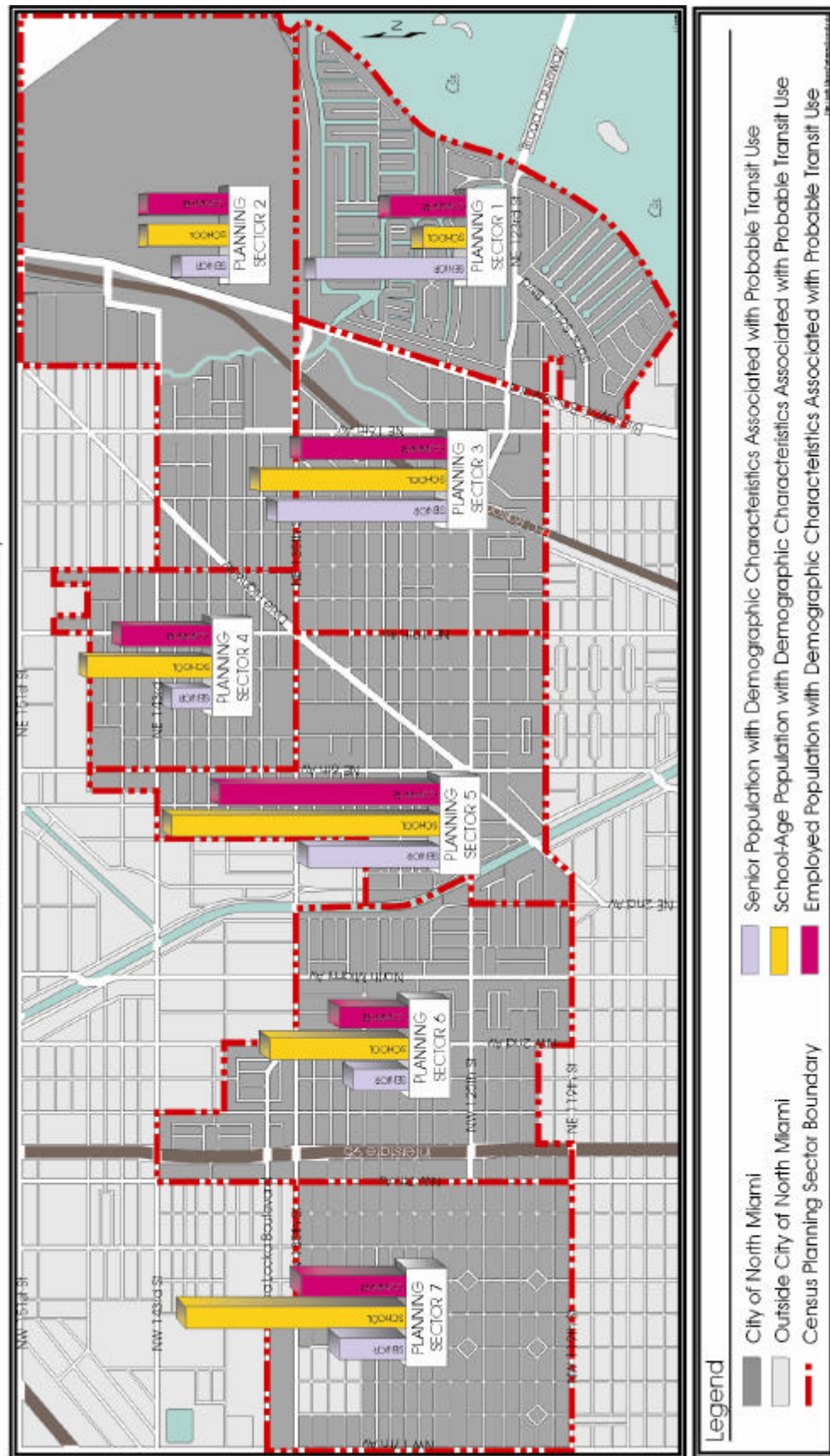


Table 3-4
Transit Circulator Target Ridership Demographic Indicators

Transit Circulator Target Rider Indicators									
After School Program Target Ridership Population									
	Planning Sector 1	Planning Sector 2	Planning Sector 3	Planning Sector 4	Planning Sector 5	Planning Sector 6	Planning Sector 7		
School Age Children	1,065	1,054	1,729	1,472	2,676	2,034	2,508		
Households with Children	603	579	894	551	1,248	850	948		48%
School Children Enrolled in Public School	461	657	1,049	770	1,638	1,461	1,527		84%
School Age Children Not Enrolled in School	247	329	520	557	741	374	689		27%
Among Not Enrolled, Probably Enrolled in Public School	139	288	451	469	627	329	578		
Comparative Target Rider Potential by Planning Sector									
Total Number of Target Students (10% target group)	600	955	1,500	1,239	2,265	1,790	2,105		211
Among Target Students, those likely to belong to families that commute by transit, bike, walking, or other	79	134	294	251	543	251	426		426
Among Target Students, those likely to belong to single parent families, and likely to have no household vehicle	8	35	131	52	139	44	66		66
Among Target Students, those likely to belong to married families with income below poverty level	12	19	90	61	114	71	141		141
Among Target Students, those likely to belong to single parent families with income below poverty level	43	51	111	36	113	30	73		73
Total At-Risk Student Ridership Potential Score	202	334	776	524	1136	575	916		916
Total At-Risk Senior Ridership Potential Score Rank	7	6	3	5	1	4	2		2

Transit Circulator Target Rider Indicators									
Senior Rider Needs									
	Planning Sector 1	Planning Sector 2	Planning Sector 3	Planning Sector 4	Planning Sector 5	Planning Sector 6	Planning Sector 7		
Comparative Target Rider Potential by Planning Sector	Number	Score							
Residents ages 65 to 75 years (10% target group)	950	95	653	310	677	527	423		42
Residents over 75 years (10% target group)	966	97	977	198	654	331	242		24
Residents 65 years and older, who are unemployed by disability, that are likely to have no vehicles in the household	1	0	0	1	0	0	0		0
Residents 65 years and older not in the labor force, because they are prevented from working by disability	27	27	49	17	50	15	14		14
Residents 65 years and older, who are employed without disability, and are likely to have no household vehicle	17	7	42	6	24	9	7		7
Households with Social Security income, but without retirement income, and likely to have no household vehicle	70	19	126	31	99	33	27		27
Poverty status, 60 years and over	209	72	215	69	181	80	154		154
Poverty status, 75 years and over	150	32	108	7	71	0	19		19
Total At-Risk Senior Ridership Potential Score	664	204	703	182	557	224	283		283
Total At-Risk Senior Ridership Potential Score Rank	2	6	1	7	3	5	4		4

Transit Circulator Target Rider Indicators									
Commuter and Other Transit Transfer Rider Needs									
	Planning Sector 1	Planning Sector 2	Planning Sector 3	Planning Sector 4	Planning Sector 5	Planning Sector 6	Planning Sector 7		
Comparative Target Rider Potential by Planning Sector	Number	Score							
Workers 16 years and older	4,311	3,110	3,703	2,101	4,864	3,008	3,022		310
Workers that use public transportation (all public transit)	186	218	294	215	562	171	310		18
Workers that walk to work	60	23	114	62	148	32	19		19
Workers that carpool (10% target group)	506	368	519	244	730	407	517		52
Workers that bicycle to work to work (10% target group)	8	12	33	16	43	15	5		5
Students enrolled in college, that are likely to have no vehicle in the household	44	67	141	79	136	44	54		54
Total At-Risk Senior Ridership Potential Score	342	346	604	382	923	289	435		435
Total At-Risk Senior Ridership Potential Score Rank	6	5	2	4	1	7	3		3

4. TRANSIT DEMAND CHARACTERISTICS

Chapter 3 identifies specific transportation needs by their relative intensity and geographic distribution. That analysis provided a basis for determining route and schedule structures in Task 7, Operation Plan and Implementation. This section provides information regarding existing transit trip characteristics, and public attitudes regarding transit services.

In 1993, MDTA conducted an on-board survey of the County's sixty-nine (69) regular bus routes. In total, 12,904 riders were interviewed. For purposes of the current study, records for passengers with origins, destinations and/or transfers within the City of North Miami were extracted, approximately 7% of the total responses (856 records). A copy of the survey instrument is included in Appendix B. The results extracted from the 1993 MDTA *Metrobus Rider Survey* as applicable to North Miami are summarized in Appendix C.

As part of the 1994 Northeast Dade Transit Improvement Study, MDTA conducted attitudinal surveys of existing riders and the general population of Northeast Dade County.[■] MDTA collected data through onboard surveys and random distributed telephone surveys, published in three languages (English, Spanish, Creole). The results were summarized by subareas, including the Greater North Miami area (North Miami, Biscayne Park, southern Biscayne Gardens). Although these surveys included substantial trip characteristic and rider profile data, they provide significant detailed attitudinal and preference information regarding modal choice, transit service, and transit service improvements. A summary of these surveys for bus riders and all other transportation mode users for the North Miami subarea is included in Appendix C.

TRIP CHARACTERISTICS

The predominant transit trip purpose for North Miami is home-based work (62%), with home-based school (17%), and home-based shopping (13%) trips ranking second and third. Planning Sectors 5 and 7 have higher percentages of home-based school trips, 26%, and 31% respectively.

For North Miami non-transit travelers (98% auto), 84% of their trips are home-based work, and 13% are home-based shopping trips. Only 1% is home-based school trips. Average travel time for non-transit riders in North Miami is 16 minutes.

Ninety-one percent of bus riders walk to or from the bus or transfer to another bus. Transfers account for 22%. Most walk three blocks or less (51%). Eighteen percent

[■] Area bounded by NW/NE 62nd Street to the County Line; NW 7th Avenue to the Atlantic Ocean
North Miami Community Transit Circulator Study
PRL & Associates □□□□ NORTH MERIDIAN

(18%) walk more than three blocks. Planning Sector 6 has a slightly higher percentage of those who walk more than three blocks (22%).

Approximately 70% of North Miami bus riders transfer to another bus or mode of public transit on their trip. Fifty-four percent (54%) of respondents state that they did not have a problem with transfers. Twenty four percent (24%) responded that they prefer not to or will not transfer.

Most North Miami bus riders are regular commuters, using the bus five or more day per week. Eleven percent are occasional riders, using the bus twice or less per week.

Table 4-1 displays the origin/destination distribution of North Miami bus riders by Planning Sector is as follows:

Table 4-1 Origin and Destination of North Miami Bus Riders, by Planning Sector		
Planning Sector	Survey Responses	Percent
1	89	10%
2	147	17%
3	139	16%
4	30	4%
5	216	25%
6	109	13%
7	126	15%

TRANSIT RIDER PROFILE

Seventeen (17%) percent of North Miami bus riders are of high school age (16 to 19 years). Five percent are 15 years old or less and five percent are 60 years or older.

Forty-three (43%) percent have no vehicle in their household. Nineteen percent (19%) have more than one vehicle.

Over 85% of bus riders are from households with incomes less than the mean household income for the City (\$32,891 in 1989).

ATTITUDES AND PREFERENCES

When asked why they did not use the bus, the top ranking answers were:

1. Prefer to drive my car (71%)
2. Need my car during the day or for work (16%)
3. Bus stops and routes are inconvenient (7%)

When asked what improvements would motivate them to ride the bus, the most common responses were:

1. More frequent service (46%)
2. Do not have to transfer (44%)
3. Better on-time reliability (43%)
4. Familiarity program (42%)
5. Route within 3 blocks of home or work (42%)

When asked what their biggest concerns are with MDTA transit service, the top ranking answers were:

1. Total travel time (25%)
2. Driver courtesy (18%)
3. Security (13%)
4. Doesn't go where you want (12%)
5. Bus breakdown (5%)

When asked which transit improvements they thought were important, the top ranking answers (over 90%) were:

1. More bus stops along routes (95%)
2. Faster bus service (93%)
3. More shelters at bus stops (93%)
4. Benches at all bus stops (93%)
5. Shuttle bus service to shopping malls (92%)
6. More frequent service (91%)

TRANSIT TRIP TABLES

Using the 1993 *Metrobus Rider Survey*, summarized in Appendix B, origins and destinations were extracted by Transportation Analysis Zones (TAZ) within the City of North Miami. The results, by Planning Sector, are displayed in Table 4-2 and by TAZ in Table 4-3. A map showing the TAZs within North Miami is included in Appendix E. These trip tables provide valuable information about the geographic patterns of existing transit travel within the City.

Origins are listed by Planning Sector or TAZ along the left margins of the table. Along the top margins are listed destinations by Planning Sector or TAZ. The numbers in the matrix show the number of trips between each of these origins and destination. The sums are at the bottom and right side for each origin and destination. The sum of trips from or to external locations is to the outside of the internal sums. Finally, all trips from a particular origin, or to a particular destination are summed at the extreme right column and extreme bottom row.

Table 4-2
North Miami Internal-Internal Transit Trip Table by Planning Sector
1993 Metrobus Rider Survey

Origins	Destinations									
	Planning Sector	1	2	3	4	5	6	7	Internal	External
	1	0	0	0	2	0	0	0	2	43
	2	2	0	0	0	1	0	1	4	76
	3	0	1	4	0	0	0	0	5	62
	4	0	0	0	0	1	1	0	2	15
	5	0	2	1	1	4	0	2	10	114
	6	2	1	0	0	4	3	1	11	35
	7	2	1	0	0	1	1	1	6	50
	Internal	6	5	5	3	11	5	5	40	
	External	45	59	63	10	100	29	44		745
	Total	51	64	68	13	111	34	49		785

Table 4-3
North Miami Internal-Internal Transit trip Table by TAZ
1993 Metrobus Rider Survey

[illegible]

Table 4-4
North Miami Internal-Internal Transit trip Table by TAZ
1993 Metrobus Rider Survey

[illegible]

Forty (40) trips out of 785 (5%) were internal to the City: that is, from a location in the City to a location in the City. This is not surprising considering that travel by bus requires long waiting times and possible transfers which become significant for short trips. For many internal trips, walking may be preferable to taking a bus. Even fewer trips, 12 (1%) are made completely within Planning Sectors. These results indicate that most people do not find MDTA bus service convenient for travel within the City.

TRANSIT RIDER WALKING TRIP TABLES

Walking trips made by North Miami bus riders are illustrated in Tables 4-4 and 4-5. Locations where comparatively more walking trips are made, especially among different Planning Sectors (longer walking distances) provides a good indication of community transit need. In these tables, external trips are irrelevant since these are probably made by transfer or other modes. The walking trip tables are computed by comparing TAZ origin and boarding, destination and return locations.

Walking Trip Table by Planning Sector (Table 4-4) identifies 621 possible walking trips. Of these, 87% (538) occur within a single sector (dark gray diagonal of cells), 10% (62) between adjacent sectors (light gray shaded cells) and 3% (21) between distant zones.

Since the geographic size of most TAZs in North Miami represent a good approximation of reasonable walking distance (3 blocks), walking trips between one or more TAZ suggest a need for transit service. Of the 621 trips, 507 (82%) are within the same TAZ (shaded diagonal of cells in Table 4-5). Table 4-6 indicates possible need for community transit service for transferring bus riders.

Table 4-5 Transit Rider Walking Trips	
Walking trips within the same Planning Sector but not the same TAZ	5% bus riders
Walking trips within adjacent Planning Sectors	10% bus riders
<u>Walking trips within distant Planning Sectors</u>	<u>3% bus riders</u>
Total	18% bus riders

5. PUBLIC INPUT

As part of this Study, the City conducted an initial public meeting to obtain input on current transit services, where transit services may be needed, and interest in a community shuttle. Meetings were held with the Mayor and Councilmembers. North Miami Chamber of Commerce, and North Miami staff also provided input. A survey was conducted of Johnson & Wales University students to determine if they would use a community shuttle, and where they needed and/or wanted to go. Subsequent to the development of the two service alternatives, the City held three public meetings to obtain input on route alignments, scheduling, and community preferences.

MAYOR & COUNCILMEMBERS

Councilmembers think that MDTA generally provides adequate regional transit services to North Miami residents. There was concern that bus benches and shelters are not well maintained. Further, stops are sometimes placed too close to the roadways, thereby causing a hazardous situation for waiting passengers. Councilmembers identified three populations that could benefit from a City circulator service:

- Elderly residents in the San Souci and West Side area wishing to attend City activities at City facilities;
- Children attending after school activities;
- Parents dependent upon public transit picking up their children and going home after the completion of after school activities.

NORTH MIAMI CHAMBER OF COMMERCE

North Miami Chamber staff had no specific comments regarding the current level of service provided by MDTA. They suggested that a local circulator serving the downtown North Miami business district and the commercial establishments along W. Dixie Highway and NE 6th Avenue could benefit Chamber members.

NORTH MIAMI STAFF

North Miami staff suggested that MDTA regional service does not adequately meet the needs of City residents. Buses run primarily within major corridors, resulting in significant walk for many transit dependent residents. In those areas where MDTA vehicles traverse residential neighborhoods, residents complain about the noise and fumes. Staff noted that, while the jitneys have significantly enhanced transit services to individuals dependent upon transit to get to and from work, many elderly residents are uncomfort-

able riding jitneys. In addition to those needs identified by the Mayor and Council, staff suggested a City circulator provide transit service:

- Between community centers and parks during the day;
- To the elderly residing within the central city area;
- To the Elders Institute at Florida International University;
- To Post Office, local restaurants and shops;
- To regional medical facilities (Aventura , Parkway, North Shore);
- To City Council and other official City meetings; and
- To the NW 7th Avenue shopping district.

Staff recommended that the City circulator serve different clientele at differing times of the time: the elderly in the mornings; children in the afternoon, and children and adults in the evenings. Parks & Recreation staff suggested that Parks plan its programs to coincide with the circulator schedule.

JOHNSON & WALES UNIVERSITY

Johnson & Wales University provides housing to approximately 400 students. During the 1999 school year, approximately 200 students resided at the Greenwich Apartments (NE 123rd Street/16th Avenue); in the 2000 school year, Johnson & Wales has contracted with Courtyards at the Park (NE 135th Street/16th Avenue) to house an additional 100 students. Generally, most students take classes from September through June. During the summer, those students remaining for classes are housed on campus.

Class sessions begin in the early morning (7:00 AM) and end in early evening (7:30 PM). While more take classes in the mornings, students stay on campus as late as 9:00 PM to use campus facilities. Students generally walk between the campus and the apartments, sometimes as late as 9:30 or 10:00 PM.

Johnson & Wales also owns and operates the Bay Harbor Inn. Students work one of two shifts at the Inn (7:00 AM to 3:00 PM; 3:00 PM to 7:00 PM). Some students also work at other locations, including the Aventura Mall and Intracoastal Mall.

Johnson & Wales has contemplated the acquisition of a van or minibus to transport the students. If the City implements circulator service which can meet the needs of its students, the University would consider provision of funding toward the City service.

The main campus of Johnson & Wales houses a cafeteria that is open to the public. It serves lunch 11:00 AM – 1:00 PM and dinner 4:45 PM to 6:00 PM. Johnson & Wales staff suggest that a circulator bus would enable more North Miami residents to use the cafeteria.

The City developed a survey to determine if Johnson & Wales students would use a circulator and where students wanted to go. Thirty-eight students responded. Appendix F provides a copy of the blank survey. Table 5-1 summarizes the results.

Johnson & Wales University Student Survey										Table 5-1
CURRENT:										
What do you use for transportation now?	No.	22	2	18	11	19	13	15		
	%	57.9%	5.3%	47.4%	28.9%	50.0%	34.2%	39.5%		
What day(s) do you go?	No.	13	17	15	30	35	32	22		
	%	34.2%	44.7%	39.5%	78.9%	92.1%	84.2%	57.9%		
How often do you go?	No.	5	4	29						
	%	13.2%	10.5%	76.3%						
CITY MINIBUS										
Would you use a City-operated public transit minibus to travel to destinations in or near North Miami?										<u>No.</u> 36 94.7%
If a minibus were available, would you use it to get to and from classes if you:										
		arrived before class:				had to wait after class:				
		<u>No.</u>		<u>%</u>		<u>No.</u>		<u>%</u>		
30 - 45 minutes		10		26.3%		6		15.8%		
15 - 20 minutes		18		47.4%		13		34.2%		
5 - 10 minutes		38		100.0%		19		50.0%		
Where would you go in addition to class?	No.	23	28	20	33	23	32	12		
	%	62.2%	75.7%	54.1%	89.2%	62.2%	86.5%	32.4%		
Most Often %										
How long would you be willing to catch the minibus before or after your trip?										
		<u>No.</u>		<u>%</u>						
30 - 45 minutes		4		10.5%						
15 - 20 minutes		18		47.4%						
5 - 10 minutes		16		42.1%						
How far would you be willing to walk to and from the minibus and your destination?										
		During the day?				after sundown?				
		<u>No.</u>		<u>%</u>		<u>No.</u>		<u>%</u>		
3 - 5 city blocks		9		23.7%		6		15.8%		
1 - 2 city blocks		21		55.3%		15		39.5%		
less than 1 block		8		21.1%		17		44.7%		

PUBLIC MEETINGS

Pre-Route Development

In March 1999, the City held a public meeting at the North Miami Library to solicit input from residents on the development of a City circulator service. The City advertised the meeting in the newspaper and sent letters inviting community leaders to participate. Ten individuals attended, all of who were enthusiastic about a citywide transit service. Specific comments and suggestions included:

- Develop routes which supplement services provided by the North Miami Foundation to elderly residents;
- Provide services which connect to the Elderly Institute at Florida International University, to the Aventura Mall, and to the Intracoastal Mall;
- Coordinate services so that transfers to MDTA and other municipal circulators is convenient to North Miami residents; and
- Provide services in the evenings and on weekends to take residents to social events, such as movies, dining out, etc.

Post-Route Development

Subsequent to data collection, the City developed two route alternatives. Meetings were held in September and October 1999 with three community groups (Westside Property Owners' Association, Central North Miami Homeowners' Association, and Keystone Point Homeowners' Association) to obtain input on the proposed route alignments. The City invited the general public to attend through advertisements in the Miami Herald.

The community groups preferred Alternative 1, with minor route modifications. They suggested:

- The North Miami Library should not serve as the transfer site.
- Route should not travel along NE 127th Street, instead crossing from NE 2nd Avenue to NE 6th Avenue further north.

The City also provided a survey for the Keystone Pointe Homeowners' Association newsletter. Appendix G provides a copy of the blank survey. The Keystone Pointe Homeowners Association has not received any responses to the survey. The Central

North Miami Homeowners' Association formed a committee to work with the City during implementation of the circulator.

6. SERVICE ALTERNATIVES DEVELOPMENT

Two alternatives were developed to provide community circulator service to elderly residents, school children and city residents, and to afford more effective neighborhood transfers to MDTA regional bus routes.

To most effectively provide service throughout the City, each alternative recommended two routes. The routes were timed to meet at or near the City Library so that passengers could transfer between them. This site was selected as the transfer point because it is centrally located, is close to major City facilities, and can provide a safe, comfortable, and convenient waiting area throughout the circulator's hours of operation.

ALTERNATIVE 1

Route A serves the City west of the Library. The route begins at the West Side Community Center and terminates at North Miami Elementary. Stops include Ben Franklin Elementary, US Post Office on NW 119th Street, Gratigny Elementary, and Publix (NE 6th Avenue). Approximate time to complete one run (from the West Side Community Center to North Miami Elementary and return to West Side Community Center) is 78 minutes (1 hour, 18 minutes).

Route B serves the City east of the Library. The route begins at Besade Park and terminates at the eastern end of 135th Street. Stops include Johnson & Wales University, Gwen Margolis Community Center, City Hall, and Publix (Biscayne Blvd). Approximate run time (from Besade Park to 135th Street and back to Besade Park) is 88 minutes (1 hour, 28 minutes).

ALTERNATIVE 2

Route A begins at the West Side Community Center and terminates at Biscayne Boulevard and 145th Street. Stops include Ben Franklin Elementary, Natural Bridge Elementary, and Publix (NE 6th Avenue). Approximate time to complete one run (from the West Side Community Center to Biscayne Boulevard and 145th Street and return to West Side Community Center) is 90 minutes (1 hour, 30 minutes).

Route B begins at the eastern end of NE 135th Street and terminates at Gratigny Elementary. Stops include Johnson & Wales University, Gwen Margolis Community Center, City Hall, and Publix (Biscayne Blvd). Approximate run time (from NE 135th Street to Gratigny Elementary and back to NE 135th Street) is 82 minutes (1 hour, 22 minutes).

Appendix H provides summary statistics and alignments for Alternatives 1 and 2.

ROUTE SELECTION

After review of Alternatives 1 and 2 with North Miami staff and at the public meetings, the City has chosen to implement Alternative 1 with minor modifications (Figure 6-1). Approximate headways for each route is 45 minutes, with a total round trip run time of one hour, 30 minutes. Both routes will provide service weekdays, 10 hours a day, starting at approximately 9:00 AM and ending at approximately 7:00 PM. The City projects that service will begin in 2000 once funding is available.

The City will consider providing weekend to special express services to locations outside of the City, such as: Kane Concourse, Bal Harbour and Surfside, or Aventura Mall. Weekend excursion trips could depart from the North Miami Library, with passengers transferring from regular circulators that would run their normal or curtailed routes (without school and work location stops).

7. OPERATIONAL PLAN & IMPLEMENTATION

The City proposes to initiate service in 2000 as soon as funding is available. Routes will operate ten hours a day, Monday through Friday. For the first ninety days, the service will be offered without charge. The City will evaluate ridership and determine a fare structure, if any, during that period. For approximately the first year of service, the City intends to contract with a private vendor to provide vehicles and operate the service.

Within one year following program startup, the City plans to purchase alternative fuel vehicles for the service, and will seek a distinctive vehicle design, such as a trolley. The City proposes to provide the vehicles to a private vendor, who will operate the transit service and collect required Federal, State and County transit information. The City will seek public and private grants to help fund acquisition of the alternative fuel vehicles.

Funding for technical assistance during the implementation phase has been provided through the FY 2000 MPO Municipal Grant Program. The City will request funds from Miami-Dade County to offset operating costs in the first year of operation. The City has included an appropriation for the service in its FY 2000 budget and is seeking funding from other sources.

The City proposes to implement the circulator service during phases 2 and 3:

PHASE 2

Finalize circulator route alignments, schedules, and budgets

Develop marketing program

Hire vendor to operate circulator services

- Prepare and issue RFP and/or RFB for service

- Analyze responses

- Select vendor

- Audit selected vendor to assure compliance with FTA, FDOT and County requirements, including Rule 1490

- Execute agreement with vendor

Prepare resolution adopting vendor's safety plan, complaint response plan, and other plans as required by FTA, FDOT, and County procedures.

Establish evaluation & monitoring and complaint & customer satisfaction tracking systems.

Execute Interlocal Agreement with Miami-Dade County

- Review existing Interlocal Agreements between Municipalities and Miami-Dade County

Modify Interlocal Agreement as necessary to reflect requirements of North Miami and provide copies to Miami-Dade Transit Agency
Obtain City Council approval and execute Interlocal Agreement
Obtain County Commission approval and County Manager's signature, executing Agreement

PHASE 3

Begin service

Initiate monitoring, evaluation and complaint/customer satisfaction activities

Review tools used by other municipal and regional transit providers

Adapt tools as appropriate

Review with funding source(s) to assure all necessary information provided

Train staff/vendor employees to use tools

Begin monitoring, evaluation and complaint/customer satisfaction activities

Evaluate ridership and determine fare(s) to be charged (if any)

Finalize fare collection policy if necessary

Begin collection of fares

Obtain alternative funding for acquisition of vehicles and operation of service

Research possible public and private funding sources, and apply for funds as opportunities are identified

Prepare and submit request to County for operating monies to fund circulators

Prepare and submit request to County for capital funds to acquire alternative fuel vehicles

Acquire alternative fuel vehicles and provide to vendor

Develop specifications for acquisition of alternative fuel vehicles

Issue RFP/RFB

Review responses and select vendor

Determine final specifications and details for vehicle construction

Final inspection & receipt of vehicles

Place vehicles into operation

Coordinate with other entities providing municipal, circulator and regional transit services

8. FUNDING STRATEGY

The 2000 MPO Municipal Grant Program has provided funding for technical assistance during the implementation phase of this project. The City's FY 2000 Operating Budget includes an appropriation for marketing and operating the service through September 30, 2000

Table 8-1

City of North Miami Circulator Service Estimated Budget				
	Annualized Cost			Est. Costs: FY 2000
	Weekday Service	Special Events	Total	
Planning Costs	\$27,000	\$500	\$27,500	\$20,600.0
Administrative Costs	6,800	100	6,900	5,200
Marketing Costs	14,700	300	15,000	11,300
Subtotal	48,500	900	49,400	37,100
Operations	240,000	4,800	244,800	110,500
Typical Year Costs	\$288,500	\$5,700	\$294,200	\$147,600
Revenue Hours	4,800	96	4,896	2,210
Per Day	10	4	10.0	10
Days per Year	240	12	5	112
# of Vehicles	2	2	2	2
Percentage of Total	98.04%	1.96%	100.00%	
Allocated Cost per Hour	\$10.10	\$9.38	\$10.09	\$16.79
Vehicle Cost/Hour	\$50.00	\$50.00	\$50.00	\$50.00
Fully Allocated Cost/hour	\$60.10	\$59.38	\$60.09	\$66.79

The preliminary budget for first year service appears in Table 8-1. Budget assumptions include:

- Technical assistance during the implementation phase will be provided through consultants and in-house staff.
- The City plans to a private transit operator, which will provide vehicles and drivers. The cost per hour for an alternatively fueled minibus is estimated at \$50. The City estimates that it will operate the vehicles 10 hours a day, 5 days a

week. Additionally, the City may use the vehicles for several special events during the year.

The City is seeking funding for the program startup and is requesting funds from Miami-Dade County to offset FY 2000 operating and marketing costs. During the next year, the City will seek public and private grant funds for acquisition of alternatively fueled vehicles. During the second year of services, the City may explore the feasibility of private-public partnerships to operate and market routes, and to acquire and maintain bus stop amenities.